

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-8, 10, 12-20, 22, 24 and 26 are presently active in this case, Claims 1, 14, 15, 22, 24 and 26 amended, and Claims 9, 11, 21, 23, and 25 cancelled by way of the present amendment.

In the outstanding Office Action, Claims 1-4, 6-11 and 13-26 are rejected under 35 U.S.C. § 102(e) as being anticipated by Immonen et al. (U.S.P. 7,010,305); Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Immonen et al. and further in view of Rinne (U.S. Publication No. 2005/0185651); and Claim 12 is rejected under 35 U.S.C. §103(a) as being unpatentable over Immonen et al.

Turning now to the merits, in order to expedite issuance of a patent in this case, Applicants have amended the independent claims to clarify the patentable distinctions of the present invention over the cited references. Specifically, Claim 1, as amended, recites a base station including a packet classification unit configured to classify packets received/transmitted from/to a plurality of mobile stations into a quantitative guarantee type packet having a request value that indicates quantitative value for communication quality or a relative guarantee type packet not having the request value that indicates quantitative value for communication quality. Also recited is a quantitative guarantee type buffer configured to store the quantitative guarantee type packet, and a relative guarantee type buffer configured to store the relative guarantee type packet. A transmission order controller is configured to control a transmission order of the packets for every classified quantitative guarantee type packet in the quantitative guarantee type buffer and every classified relative guarantee type packet in the relative guarantee type buffer. Further, a radio resource assignment unit is configured to assign radio resources to the quantitative guarantee type packet in the

quantitative guarantee type buffer and the relative guarantee type packet in the relative guarantee type buffer, according to the transmission order controlled by the transmission order controller. If radio resources still remain after assignment to the quantitative guarantee type packet in the quantitative guarantee type buffer, the radio resource assignment unit assigns remaining radio resources to the relative guarantee type packet in the relative guarantee type buffer.

Thus, amended Claim 1 recites “classifying packets into a quantitative guarantee type packet having a request value that indicates quantitative value for communication quality or a relative guarantee type packet not having the request value that indicates quantitative value for communication quality” and “controlling a transmission order of the packets for every classified quantitative guarantee type packet in the quantitative guarantee type buffer and every classified relative guarantee type packet in the relative guarantee type buffer.”

Independent Claims 14 and 15 have been amended to include similar features recited in system and method claim format.

The primary cited reference to Immonen et al. is a newly applied cited reference. Immonen et al. discloses a method of assigning values of service attributes to transmissions between a radio access network and user equipment. As seen in Figs. 3 and 4 of Immonen et al., the system disclosed therein includes a public access controller (PAC) 34 coupled to access point (AP) 33 by way of a network. As noted in Immonen et al., PAC 34 classifies packets transmitted to the user equipment into real-time packet or non-real-time packet.<sup>1</sup> Further, AP 33 determines QoS class corresponding to each real-time packet and each non-real-time packet, and performs packet scheduling according to the determined QoS class.<sup>2</sup> Thus, Immonen et al. discloses performing the packet scheduling according to the determined

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<sup>1</sup> Immonen et al. at Col. 13 lines 9-14, and Col. 8, lines 54-60.

<sup>2</sup> Immonen et al. at Col. 13 lines 9-5.

QoS class which corresponds to the each real-time packet and the non-real-time packet. However, Immonen et al. does not disclose “classifying packets into a quantitative guarantee type packet having a request value that indicates quantitative value for communication quality or a relative guarantee type packet not having the request value that indicates quantitative value for communication quality” and “controlling a transmission order of the packets for every classified quantitative guarantee type packet in the quantitative guarantee type buffer and every classified relative guarantee type packet in the relative guarantee type buffer,” as amended in Claims 1, and 14-15.

Moreover, Immonen et al. is not intended to utilize remaining radio resources effectively while guaranteeing radio resources which satisfies the request value of the quantitative guarantee type packet, regarding the quantitative guarantee type packet having a request value that indicates quantitative value, as described in Applicants’ specification with respect to the present invention. Therefore, Immonen et al. also does not disclose or suggest the feature “if radio resources still remain after assignment to the quantitative guarantee type packet in the quantitative guarantee type buffer, assigning remaining radio resources to the relative guarantee type packet in the relative guarantee type buffer,” as also recited in amended independent Claims 1, 14 and 15.

In this regard, Applicants note that the Office Action cites Col. 9, lines 37-47 as teaching this feature (which was originally recited in dependent Claims 21, 23 and 25 rejected in the Office Action). However, Col. 9, lines 37-47 of Immonen et al. describes the use of real time and non-real time profiles as a default profile to select values of attributes to be used for activating a connection. There is simply no discussion in Immonen et al. about the assignment of radio resources still remaining after assignment to the quantitative guarantee type packet, as recited in the independent claims. This provides an additional distinction of these claims over Immonen et al.

The secondary reference to Rinne is cited solely for teaching of the dependent Claim 5, and thus is not asserted in the Office Action for correcting the deficiencies of Immonen et al. noted above. Moreover, as previously discussed on record, Rinne discloses providing communication transmission based only on QoS classes, without any indication of quantitative guarantee type request values for communication quality. Thus, Rinne fails to teach “classifying packets into a quantitative guarantee type packet having a request value that indicates quantitative value for communication quality or a relative guarantee type packet not having the request value that indicates quantitative value for communication quality” and “controlling a transmission order of the packets for every classified quantitative guarantee type packet in the quantitative guarantee type buffer and every classified relative guarantee type packet in the relative guarantee type buffer,” as amended in Claims 1, and 14-15.

For the reasons discussed above, amended independent Claims 1, 14 and 15 patentably define over the cited references. As Claims 2-8, 10, 12-13, 16-20, 22, 24 and 26 depend from one of the independent claims noted above, these dependent claims also patentably define over the cited references. Nevertheless, Applicants submit that several dependent claims provide a further basis for patentability over the cited references, apart from the features of the independent claims discussed above.

Specifically, Claims 22, 24 and 25 have been amended to recite that if radio resources still remain after assignment to the relative guarantee type packets, *the further remaining radio resources are assigned* to the quantitative guarantee type packets *further remaining in the quantitative guarantee type buffer*. The cited references also do not disclose these additional features, and thus, Claims 22, 24 and 25 are patentable over the cited references even assuming that the rejection of the independent claims is maintained.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application and the present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

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